

Federal Communications Commission

§ 11.33

measures and be configured so that authorized personnel can readily select and program the EAS Encoder with Originator, Event and Location codes for either manual or automatic operation.

(2) *Inputs.* The encoder shall have two inputs, one for audio messages and one for data messages (RS-232C with standard protocol and 1200 baud rate).

(3) *Outputs.* The encoder shall have two outputs, one audio port and one data port (RS-232C with standard protocol and 1200 baud rate).

(4) *Calibration.* EAS Encoders must provide a means to comply with the modulation levels required in §11.51(f).

(5) *Day-Hour-Minute and Identification Stamps.* The encoder shall affix the JJJHHMM and LLLLLLLL codes automatically to all initial messages.

(6) *Program Data Retention.* Program data and codes shall be retained even with the power removed.

(7) *Indicator.* An aural or visible means that it activated when the Preamble is sent and deactivated at the End of Message code.

(8) *Spurious Response.* All frequency components outside 200 to 4000 Hz shall be attenuated by 40 dB or more with respect to the output levels of the mark or space frequencies.

(9) *Attention Signal generator.* The encoder must provide an attention signal that complies with the following:

(i) *Tone Frequencies.* The audio tones shall have fundamental frequencies of 853 and 960 Hz and not vary over ± 0.5 Hz.

(ii) *Harmonic Distortion.* The total harmonic distortion of each of the audio tones may not exceed 5% at the encoder output terminals.

(iii) *Minimum Level of Output.* The encoder shall have an output level capability of at least +8 dBm into a 600 Ohm load impedance at each audio tone. A means shall be provided to permit individual activation of the two tones for calibration of associated systems.

(iv) *Time Period for Transmission of Tones.* The encoder shall have timing circuitry that automatically generates the two tones simultaneously for a time period of not less than 8 nor longer than 25 seconds. NOTE: Prior to July 1, 1995, the Attention Signal must

be at least 20 and not more than 25 seconds.

(v) *Inadvertent activation.* The switch used for initiating the automatic generation of the simultaneous tones shall be protected to prevent accidental operation.

(vi) *Indicator Display.* The encoder shall be provided with a visual and/or aural indicator which clearly shows that the Attention Signal is activated.

(b) *Operating Temperature and Humidity.* Encoders shall have the ability to operate with the above specifications within an ambient temperature range of 0 to +50 degrees C and a range of relative humidity of up to 95%.

(c) *Primary Supply Voltage Variation.* Encoders shall be capable of complying with the requirements of this section during a variation in primary supply voltage of 85 percent to 115 percent of its rated value.

(d) *Testing Encoder Units.* Encoders not covered by §11.34(e) of this part shall be tested in a 10 V/m minimum RF field at an AM broadcast frequency and a 0.5 V/m minimum RF field at an FM or TV broadcast frequency to simulate actual working conditions.

§ 11.33 EAS Decoder.

(a) An EAS Decoder must at a minimum be capable of decoding the EAS protocol described in §11.31, provide the EAS monitoring functions described in §11.52, and the following minimum specifications:

(1) *Inputs.* Decoders must have the capability to receive at least 2 audio inputs from EAS monitoring assignments, and one data input (RS-232C with standard protocol and 1200 baud rate). The data input may be used to monitor other communications modes such as Radio Broadcast Data System (RBDS), NWR, satellite, public switched telephone network, or any other source that uses the EAS protocol.

(2) *Valid codes.* There must be a means to determine if valid EAS header codes are received and to determine if preselected header codes are received.

(3) *Storage.* Decoders must provide the means to:

(i) Record and store, either internally or externally, at least two minutes of

audio or text messages. A decoder manufactured without an internal means to record and store audio or text must be equipped with a means (such as an audio or digital jack connection) to couple to an external recording and storing device.

(ii) Store at least ten preselected event and originator header codes, in addition to the seven mandatory event/originator codes for tests and national activations, and store any preselected location codes for comparison with incoming header codes. A non-preselected header code that is manually transmitted must be stored for comparison with later incoming header codes. The header codes of the last ten received valid messages which still have valid time periods must be stored for comparison with the incoming valid header codes for later messages. These last received header codes will be deleted from storage as their valid time periods expire.

(4) *Display and logging.* A visual message shall be developed from any valid header codes for tests and national activations and any preselected header codes received. The message shall include the Originator, Event, Location, the valid time period of the message and the local time the message was transmitted. The message shall be in the primary language of the broadcast station or cable system and be fully displayed on the decoder and readable in normal light and darkness. All existing and new models of EAS decoders manufactured after August 1, 2003 must provide a means to permit the selective display and logging of EAS messages containing header codes for state and local EAS events. Effective May 16, 2002, broadcast stations, cable systems and wireless cable systems may upgrade their decoders on an optional basis to include a selective display and logging capability for EAS messages containing header codes for state and local events. Broadcast stations, cable systems and wireless cable systems which replace their decoders after February 1, 2004 must install decoders that provide a means to permit the selective display and logging of EAS messages containing header codes for state and local EAS events.

(5) *Indicators.* EAS decoders must have a distinct and separate aural or visible means to indicate when any of the following conditions occurs:

(i) Any valid EAS header codes are received as specified in § 11.33(a)(10).

(ii) Preprogrammed header codes, such as those selected in accordance with § 11.52(d)(2) are received.

(iii) A signal is present at each audio input that is specified in § 11.33(a)(1).

(6) *Program Data Retention.* The program data must be retained even with power removed.

(7) *Outputs.* Decoders shall have the following outputs: a data port or ports (RS-232C with standard protocol and 1200 baud rate) where received valid EAS header codes and received preselected header codes are available; one audio port that is capable of monitoring each decoder audio input; and, an internal speaker to enable personnel to hear audio from each input.

(8) *Decoder Programming.* Access to decoder programming shall be protected by a lock or other security measures and be configured so that authorized personnel can readily select and program the EAS Decoder with preselected Originator, Event and Location codes for either manual or automatic operation.

(9) *Reset.* There shall be a method to automatically or manually reset the decoder to the normal monitoring condition. Operators shall be able to select a time interval, not less than two minutes, in which the decoder would automatically reset if it received an EAS header code but not an end-of-message (EOM) code. Messages received with the EAN Event codes shall disable the reset function so that lengthy audio messages can be handled. The last message received with valid header codes shall be displayed as required by paragraph (a)(4) of this section before the decoder is reset.

(10) *Message Validity.* An EAS Decoder must provide error detection and validation of the header codes of each message to ascertain if the message is valid. Header code comparisons may be accomplished through the use of a bit-by-bit compare or any other error detection and validation protocol. A header code must only be considered valid when two of the three headers

match exactly. Duplicate messages must not be relayed automatically.

(11) A header code with the EAN Event code specified in § 11.31(c) that is received through any of the audio inputs must override all other messages.

(b) *Attention Signal.* EAS Decoders at broadcast stations shall have detection and activation circuitry that will demute a receiver upon detection of the two audio tones of 853 Hz and 960 Hz. To prevent false responses, decoders designed to use the two tones for broadcast receiver demuting shall comply with the following:

(1) *Time Delay.* A minimum time delay of 8 but not more than 16 seconds of tone reception shall be incorporated into the demuting or activation process to insure that the tones will be audible for a period of at least 4 seconds. After July 1, 1995, the time delay shall be 3-4 seconds.

(2) *Operation Bandwidth.* The decoder circuitry shall not respond to tones which vary more than ± 5 Hz from each of the frequencies, 853 Hz and 960 Hz.

(3) *Reset Ability.* The decoder shall have a means to manually or automatically reset the associated broadcast receiver to a muted state.

(c) Decoders shall be capable of operation within the tolerances specified in this section as well as those in § 11.32 (b), (c) and (d).

[59 FR 67092, Dec. 28, 1994, as amended at 60 FR 55999, Nov. 6, 1995; 67 FR 18510, Apr. 16, 2002]

§ 11.34 Acceptability of the equipment.

(a) An EAS Encoder used for generating the EAS codes and the Attention Signal must be Certified in accordance with the procedures in part 2, subpart J, of this chapter. The data and information submitted must show the capability of the equipment to meet the requirements of this part as well as the requirements contained in part 15 of this chapter for digital devices.

(b) Decoders used for the detection of the EAS codes and receiving the Attention Signal must be Certified in accordance with the procedures in part 2, subpart J, of this chapter. The data and information submitted must show the capability of the equipment to meet the requirements of this part as well as

the requirements contained in part 15 of this chapter for digital devices.

(c) The functions of the EAS decoder, Attention Signal generator and receiver, and the EAS encoder specified in §§ 11.31, 11.32 and 11.33 may be combined and Certified as a single unit provided that the unit complies with all specifications in this rule section.

(d) Manufacturers must include instructions and information on how to install, operate and program an EAS Encoder, EAS Decoder, or combined unit and a list of all State and county FIPS numbers with each unit sold or marketed in the U.S.

(e) Waiver requests of the Certification requirements for EAS Encoders or EAS Decoders which are constructed for use at a broadcast station or subject cable system, but are not offered for sale will be considered on an individual basis in accordance with part 1, subpart G, of this chapter.

(f) Modifications to existing authorized EAS decoders, encoders or combined units necessary to implement the new EAS codes specified in § 11.31 and to implement the selective displaying and logging feature specified in § 11.33(a)(4) will be considered Class I permissive changes that do not require a new application for and grant of equipment certification under part 2, subpart J of this chapter.

(g) All existing and new models of EAS encoders, decoders and combined units manufactured after August 1, 2003 must be capable of generating and detecting the new EAS codes specified in § 11.31 in order to be certified under part 2, subpart J of this chapter. All existing and new models of EAS decoders and combined units manufactured after August 1, 2003 must have the selective displaying and logging capability specified in § 11.33(a)(4) in order to be certified under part 2, subpart J of this chapter.

[59 FR 67092, Dec. 28, 1994, as amended at 60 FR 56000, Nov. 6, 1995; 67 FR 18510, Apr. 16, 2002]

§ 11.35 Equipment operational readiness.

(a) Broadcast stations and cable systems and wireless cable systems are responsible for ensuring that EAS Encoders, EAS Decoders and Attention